

IN THE CLAIMS:

The claims are amended as follows:

1. (Amended) An optical filter module comprising:

an optical filter which selectively transmits, attenuates or reflects a light having a specific wavelength;

CE
GARY
a first optical system which includes at least a first optical fiber to guide the light supplied to the optical filter, and a first lens to connect optically the first optical fiber with the optical filter, and

a second optical system which is oppositely provided to the first optical system through the optical filter, said second optical system including at least a second optical fiber to guide the light supplied from the optical filter, and a second lens to connect optically the optical filter with the second optical fiber, wherein


a lens surface of an end surface of the first optical system or the second optical system and a filter surface of an end surface of the optical filter, each including an optical path thereof, are bonded by adhesive agent coated on a portion apart from the optical path, further wherein

at least one of said lens surface and said filter surface, being opposed each other, includes at least one groove portion in said portion apart from the optical path which enables the adhesive agent penetrated through the bonded surfaces to stay therein, said groove portion being formed in such a way that penetration of the adhesive agent into the optical path can be blocked.

2. (Amended) An optical filter module comprising:

an optical filter which selectively transmits, attenuates or reflects a light having a specific wavelength;

a first optical system which includes at least a first optical fiber to guide the light supplied to the optical filter, and a first lens to connect optically the first optical fiber with the optical filter, and

 a second optical system which is oppositely provided to the first optical system through the optical filter, said second optical system including at least a second optical fiber to guide the light supplied from the optical filter, and a second lens to connect optically the optical filter with the second optical fiber, wherein

an end surface of the first optical system or the second optical system is comprised of a convex surface including a optical path and a flat portion protruding from a peripheral portion of the convex surface to an outside of the optical path direction, said flat portion being formed so as to protrude outwardly from the convex surface of which portion is a most distant from said peripheral portion, further wherein

said end surface and an end surface of the optical filter are bonded by adhesive agent coated on said flat portion.

3. (Amended) An optical demultiplexer comprising:

an optical filter which selectively transmits only a light having a specific wavelength and reflects light having other wavelengths;

a first optical system which includes a first optical fiber to guide the light supplied to the optical filter and a second optical fiber to guide the light supplied from the optical filter, and a first lens to connect optically the first and second optical fibers with the optical filter, and

a second optical system which is oppositely provided to the first optical system through the optical filter, said second optical system including at least a third optical fiber to guide the light supplied from the optical filter, and a second lens to connect optically the optical filter with the third optical fiber, wherein

a lens surface of the first optical system and a filter surface of an end surface of the optical filter, each including an optical path thereof, are bonded by adhesive agent coated on a portion apart from the optical path, further wherein

at least one of said lens surface and said filter surface, being opposed each other, includes at least one groove portion in said portion apart from the optical path which enables the adhesive agent penetrated through the bonded surfaces to stay therein, said groove portion being formed in such a way that penetration of the adhesive agent into the optical path can be blocked.

4. (Amended) An optical multiplexer comprising:

an optical filter which selectively transmits only a light having a specific wavelength and reflects light having other wavelengths;

a first optical system which includes at least a first optical fiber to guide the light supplied to the optical filter and a second optical fiber to guide the light supplied from the optical filter, and a first lens to connect optically the first and second optical fibers with the optical filter, and

a second optical system which is oppositely provided to the first optical system through the optical filter, said second optical system including at least a third optical fiber to guide the light supplied to the optical filter, and a second lens to connect optically the optical filter with the third optical fiber, wherein

a lens surface of the first optical system and a filter surface of an end surface of the optical filter, each including an optical path thereof, are bonded by adhesive agent coated on a portion apart from the optical path, further wherein

at least one of said lens surface and said filter surface, being opposed each other, includes at least one groove portion in said portion apart from the optical path which enables the adhesive agent penetrated through the bonded surfaces to stay therein, said groove portion being formed in such a way that penetration of the adhesive agent into the optical path can be blocked.

5. (Amended) An optical demultiplexer comprising:

an optical filter which selectively transmits only a light having a specific wavelength and reflects light having other wavelengths;

a first optical system which includes at least a first optical fiber to guide the light supplied to the optical filter and a second optical fiber to guide the light supplied from the optical filter, and a first lens to connect optically the first and second optical fibers with the optical filter, and

a second optical system which is oppositely provided to the first optical system through the optical filter, said second optical system including at least a third optical fiber to guide the

light supplied from the optical filter, and a second lens to connect optically the optical filter with the third optical fiber, wherein

an end surface of the first optical system is comprised of a convex surface including a optical path and a flat portion protruding from a peripheral portion of the convex surface to an outside of the optical path direction, said flat portion being formed so as to protrude outwardly from the convex surface of which portion is a most distant from said peripheral portion, further wherein

said end surface and an end surface of the optical filter are bonded by adhesive agent coated on said flat portion.

6. (Amended) An optical multiplexer comprising:

an optical filter which selectively transmits only a light having a specific wavelength and reflects light having other wavelengths;

a first optical system which includes at least a first optical fiber to guide the light supplied to the optical filter and a second optical fiber to guide the light supplied from the optical filter, and a first lens to connect optically the first optical fiber with the optical filter, and

a second optical system which is oppositely provided to the first optical system through the optical filter, said second optical system including at least a third optical fiber to guide the light supplied to the optical filter, and a second lens to connect optically the optical filter with the third optical fiber, wherein

an end surface of the first optical system is comprised of a convex surface including a optical path and a flat portion protruding from a peripheral portion of the convex surface to an outside of the optical path direction, said flat portion being formed so as to protrude outwardly from the convex surface of which portion is a most distant from said peripheral portion, further wherein

said end surface and an end surface of the optical filter are bonded by adhesive agent coated on said flat portion.

Please add the following new claims:

9. (New) An optical apparatus comprising:

an optical filter which selectively transmits, attenuates or reflects a light having a specific wavelength;

a first optical system which includes at least a first optical fiber to guide the light supplied to the optical filter, and a first lens to connect optically the first optical fiber with the optical filter, and

a second optical system which is oppositely provided to the first optical system through the optical filter, said second optical system including at least a second optical fiber to guide the light supplied from the optical filter, and a second lens to connect optically the optical filter with the second optical fiber, wherein

a lens surface of an end surface of the first optical system or the second optical system and a filter surface of an end surface of the optical filter, each including an optical path thereof, are bonded by adhesive agent coated on a portion apart from the optical path, further wherein

at least one of said lens surface and said filter surface, being opposed each other, including a coating having a low wet property in an area around the optical path which blocks the adhesive agent from penetrating into the optical path.

10. (New) An optical apparatus comprising:

an optical filter which selectively transmits, attenuates or reflects a light having a specific wavelength;


a first optical system which includes at least a first optical fiber to guide the light supplied to the optical filter, and a first lens to connect optically the first optical fiber with the optical filter,

a second optical system which is oppositely provided to the first optical system through the optical filter, said second optical system including at least a second optical fiber to guide the light supplied from the optical filter, and a second lens to connect optically the optical filter with the second optical fiber, and

a joining holder coupling the first lens and the optical filter so that an end surface of the first lens and an end surface of the optical filter are closely contacted with each other without adhesive between or surrounding the end surface of the first lens and the end surface of the optical filter.

11. (New) An optical apparatus comprising:

an optical filter which selectively transmits, attenuates or reflects a light having a specific wavelength;

 a first optical system which includes at least a first optical fiber to guide the light supplied to the optical filter, and a first lens to connect optically the first optical fiber with the optical filter, and

a second optical system which is oppositely provided to the first optical system through the optical filter, said second optical system including at least a second optical fiber to guide the light supplied from the optical filter, and a second lens to connect optically the optical filter with the second optical fiber,

wherein a metallic film is formed on an outer peripheral surfaces of the first lens and the optical filter and the first lens and the optical filter are coupled by a solder provided on the metallic film.
